ABSTRACT

Provided are a composite material excellent in plastic workability, a method of producing the composite material, a heat-radiating board of a semiconductor equipment, and a semiconductor equipment to which this heat-radiating board is applied.

This composite material comprises a metal and an inorganic compound formed to have a dendritic shape or a bar shape. In particular, this composite material is a copper composite material, which comprises 10 to 55 vol.% cuprous oxide (Cu_2O) and the balance of copper (Cu) and incidental impurities and has a coefficient of thermal expansion in a temperature range from a room temperature to 300℃ of from 5×10^{-6} to 17×10^{-6}/℃ and a thermal conductivity of 100 to 380 W/m · k. This composite material can be produced by a process comprising the steps of melting, casting and working and is applied to a heat-radiating board of a semiconductor article.